ModemUSB/E12

User Manual v0.1

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1. ATTENTION

All wireless devices for data transferring are susceptible to interference, which could affect performance

Service personnel may install driver of this product. We strongly recommend read this user manual before start installation.

The device is not water-resistant. Keep it dry.

IMPORTANT NOTES!

It is mandatory to read the notes and manual carefully before starting to use the device.

2. FOR YOUR SAFETY

In this document you will be introduced how to use ModemUSB/E12 device safely. We suggest you to adhere to following recommendations to avoid any damage to person or property.

You have to be familiar with the safety requirements before starting to use the device!

Modem USB/E10 is used for data transfer by GSM network. The modem is designed to be connected to a PC through USB connector. By connecting the modem to a PC it is possible to connect to the Internet using GSM data transfer channel. To avoid user injures that could be caused by heat or electrical voltage it is important to follow safety requirements listed below.

Installation and technical support of the device can be performed only by a service personnel or a person who has enough knowledge about this device and safety requirements.

The PC to which the ModemUSB/E12 device is to be connected must have a USB port confirming to USB 2.0 standards. Modem is supplied from +5V DC USB port.

The PC to which the device is connected shall comply with the requirements of standard EN 60950-1. ModemUSB/E12 modem can be used on first (Personal Computer) or second (Notebook) computer safety class.

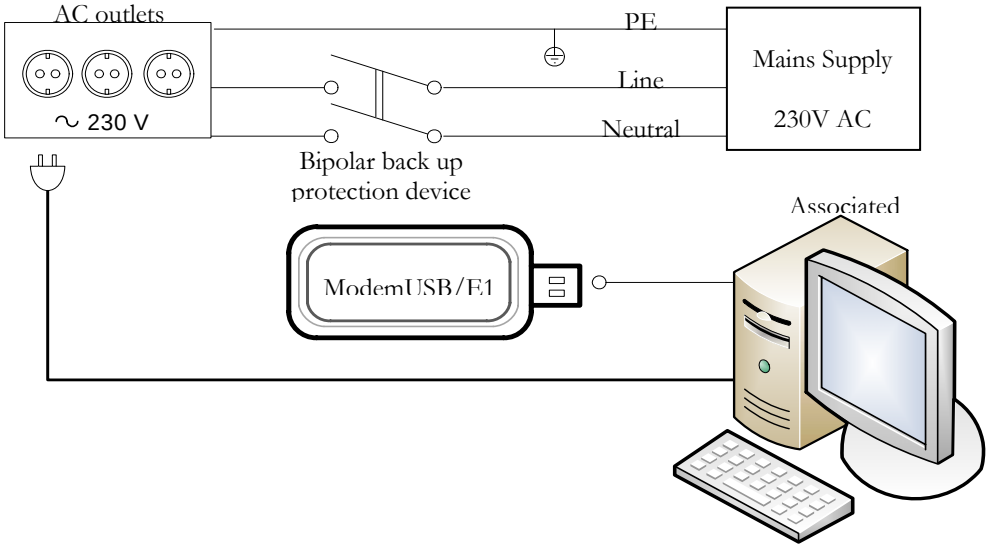
To avoid mechanical damage of the device, it is recommended to transport the device packed in damage-proof pack.

While using the device, place it such that the LED is visible to the user. It's because this LED provide information about the working modes and condition of the device.

Signal level of the modem depends on the environment in which it is working.

If the device fails to work properly, only qualified personnel may repair this product. We recommend to dismantle the device and forward it to repair centre or to the manufacturer. The modem does not contain any parts, which can be replaced.

At the installation site, supply circuits should have protective devices (bipolar back up protection device) which will protect from short-circuit and wrong ground installation. The power of connected device should satisfy power of release device. The interstice between contacts should be no less than 3mm.



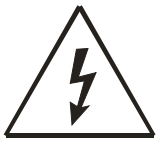
2.1.pic. Connection scheme of modem and PC.

To turn off the modem, unplug it from the USB port of the PC or unplugging the PC from the power supply.

- The device should not be connected to PC before the installation of the drivers.
- SIM card is mandatory for setting up connection to the GSM network. However, the manufacturer of this equipment does not supply the SIM card. The SIM card can be purchased from your GSM (mobile) service provider!
- For APN, user name and password please contact your GSM (mobile) service provider.
- The modem must be unplugged from the PC while inserting or taking out the SIM card. If the SIM card will be inserted or taken out from the modem while it is still plugged to the PC – it may cause damage to the modem or the SIM card. In this case, the modem will not be replaced or repaired under guarantee.
- The modem can be unplugged from the PC only if it is disconnected from the Internet and the MTC is properly closed.
- If the modem is unplugged properly from the PC wait for at least 10 seconds before plugging it back to the PC. Otherwise restart your PC before inserting modem back.
- You can find additional CE marking on the newest modem models as well in internal SIM holder with maximal powering instructions on it.

3. USER'S SERVICE

When the device is not working as per its technical specifications, the technical service of device can performed only by a qualified personnel. It is strongly recommended to handover the modem to repairer or manufacturer. No exchangeable parts inside of modem.



Do not mount or serve device during a thunderbolt.

4. BASIC INFORMATION

4.1 Introduction

ModemUSB/E12 is a device designed for data transmission via GSM Network. The user-friendly design allows you to directly connect the device to one of the USB ports of your PC/laptops. Once a SIM card is inserted in the modem and the device is connected to the PC, you would be able to send SMS or access internet via GSM networks (mobile networks). ModemUSB/E12 supports the following data-bearers: CSD, GPRS, EDGE and SMS.

4.2 Legal Notice

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Other product and company names mentioned herein may be trademarks or trade names of their respective owners.

4.3 Contacts

If you face any problems related to the device, which you are not able to solve by yourself, please contact your local distributor. We will be very glad to help you.

4.4 Acronyms

APN	Access Point Name.
CSD	Circuit Switched Data.
GPRS	General Packet Radio Service.
EDGE	Enhanced Data rates for GSM Evolution
GSM	Global System for Mobile communications.
ISP	Internet Service Provider.
PIN	Personal Identification Number.
SIM	Subscriber Identity Module.
SMS	Short Message Service.
TCP/IP	Transmission Control Protocol/Internet Protocol.
USB	Universal Serial Bus.

5. PACKAGE CONTENTS

ModemUSB/E12 modem is packed in a box and contains all the accessories required for normal operation:

- ModemUSB/E12 modem.
- CD with User Manual and drivers.
- "USB A jack ↔ USB A socket" connection cable.
- Leaflet "Quick Start Guide".

Note: The manufacturer does not supply the SIM card, which is mandatory for setting up a connection to the GSM network! The SIM card may be purchased from your GSM (mobile) service provider!!

If any of the components are missing please contact your local distributor.

6. TECHNICAL SPECIFICATION

6.1 Data transferring

The data type and data transfer speed depends on the service provided by your GSM operator. ModemUSB/E12 supports the following data-bearers.

EDGE

- 850/900/1800/1900 MHz.
- Class ES2 (26/27 dBm) for 8-PSK modulation
- Class 12
  - MS class B
  - Coding scheme 1-9

GPRS

- 850/900/1800/1900 MHz.
- Capacity class 4 (2W) 850/900 MHz waves
- Capacity class 1 (1W) 1800/1900 MHz waves.
- GPRS class 10.

CSD

- Data transfer speed up to 9.6 kbps

6.2 Recommended PC Configuration and Operation System support

- CD – ROM.
- USB v 2.0 port.
- 100 MB of free hard disk space.
- Supported Operating Systems: XP (SP2) and Vista.
- Drivers available for: Windows 2000 (SP4), Mac OS X, Linux kernel 2.4.32 or higher.

6.3 Indication

A LED indicator "Power" is located on the side of ModemUSB/E12. This LED indicates the operating mode and failure conditions of the modem. Modem operating modes are described in Table 6.3.1.

Table 6.3.1. Modem operating modes

LED status	Description
"Power" LED on	Modem power supply on
"Power" LED off	Modem failure

6.4 Operating Parameters

ModemUSB/E12 modem derives +5V DC power from the USB port, therefore, the PC must have a USB port conforming to the USB 2.0 standards. The device does not require any external power supply for its operation.

Table 6.4.1. Modem operating parameters

Parameter	Minimal	Nominal	Maximal	Units
Power supply voltage	4.5	5.0	5.5	V
Power consumption	34		360	mA
Marginal operating temperature	-10		+55	ºC
Storage temperature	-40		+65	ºC
Modem weight		51		g
Relative air humidity			85	%

Note: modem may malfunction if the environmental conditions do not confirm to those provided in the Table!

6.5 Mechanical characteristics

ModemUSB/E12 modem housing is made of plastic. External view and measurements (in mm) of the device are shown in Figure 6.5.1.

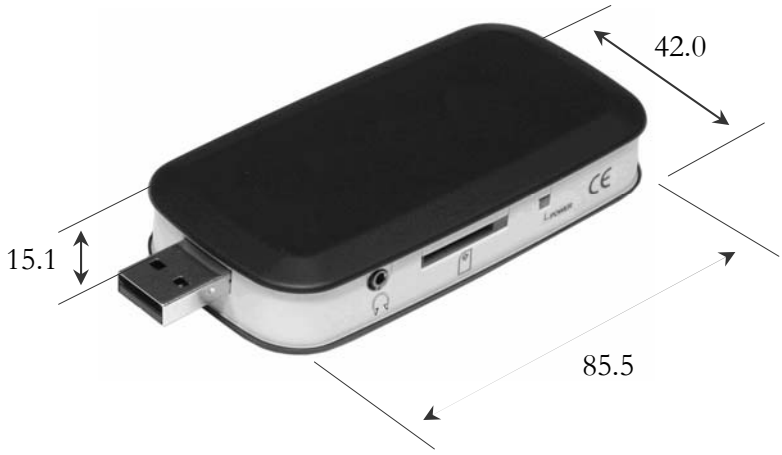


Figure 6.5.1. External view of ModemUSB/E12

7 HOW TO START?

Before you begin make sure that:

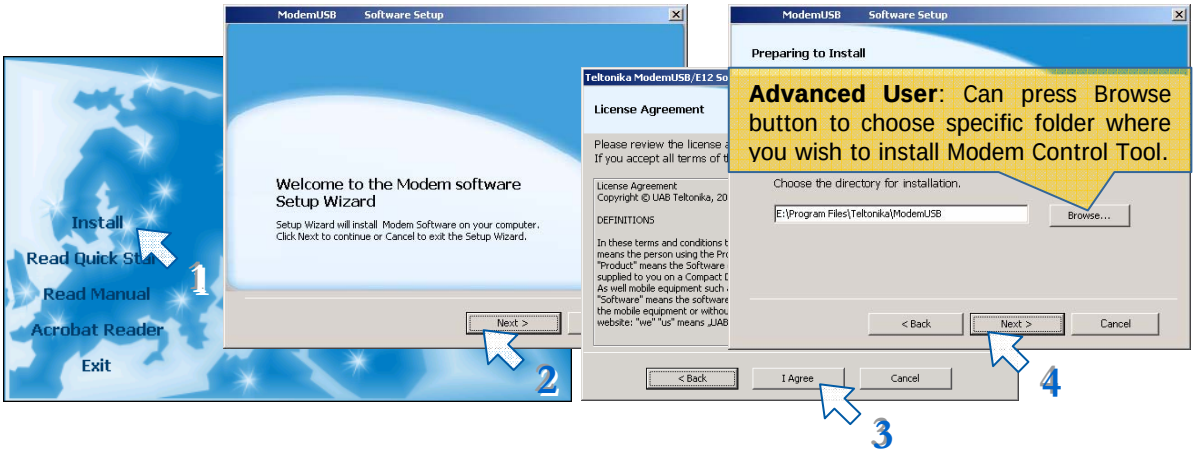
- You have a GSM SIM card with data transfer service activated.
- ModemUSB/E12 is ready to work – SIM card is pushed in.
- Dial-up networking is installed on your PC (OS) (this should be installed with OS by default).
- TCP/IP protocol is installed on your PC (this should be installed with OS by default).

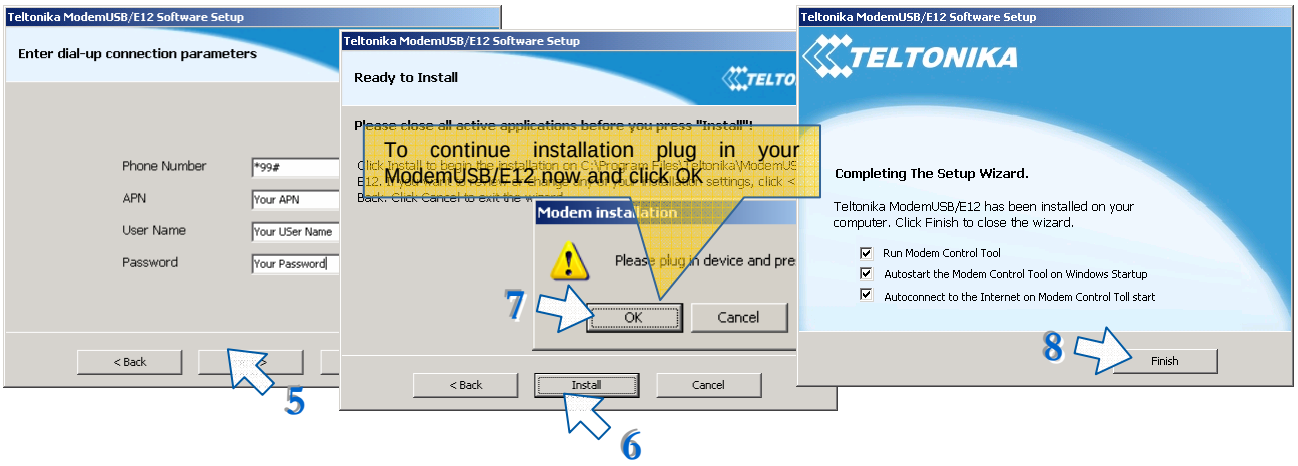
7.1 Driver and Software Installation on Windows XP

In order to install ModemUSB/E12 drivers and software, do the following:

Notice: For first time ModemUSB/E12 modem can only be connected to the PC during the driver installation.

- Insert the CD into CD-ROM.
- Click Install in automatically opened window. If the window did not appear, run autorun.exe file located on the CD in Software catalog. The installation procedure of the ModemUSB/E12 modem will begin.

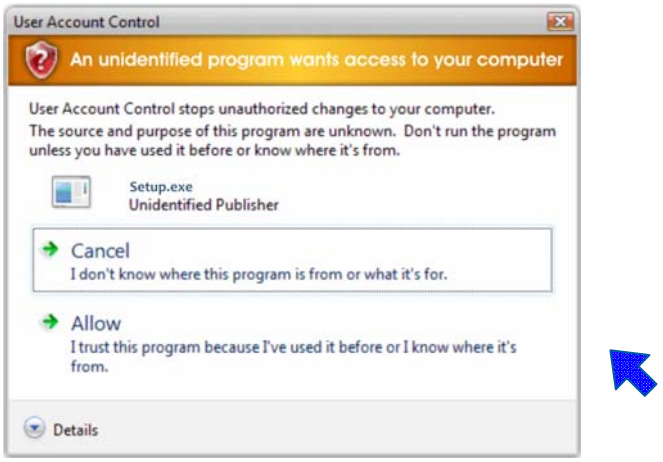

Install
Read Quick Start
Read Manual
Acrobat Reader
Exit
1
ModemUSB Software Setup
Welcome to the Modem software Setup Wizard
Setup Wizard will install Modem Software on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
Next >
2
Teltonika ModemUSB/E12 So
License Agreement
Please review the license
If you accept all terms of t
License Agreement
Copyright © UAB Teltonika, 20
DEFINITIONS
< Back
I Agree
Cancel
3
ModemUSB Software Setup
Preparing to Install
Advanced User: Can press Browse button to choose specific folder where you wish to install Modem Control Tool.
Choose the directory for installation.
E:\Program Files\Teltonika\ModemUSB
Browse...
< Back
Next >
Cancel
4


Teltonika ModemUSB/E12 Software Setup
Enter dial-up connection parameters
Phone Number
*99#
APN
Your APN
User Name
Your USer Name
Password
Your Password
< Back
5
Teltonika ModemUSB/E12 Software Setup
Ready to Install
Please close all active applications before you press "Install"!
Click Install to begin the installation on C:\Program Files\Teltonika\ModemUS
< Back
Install
Cancel
6
Modem installation
Please plug in device and pre
OK
Cancel
7
To continue installation plug in your ModemUSB/E12 now and click OK
Teltonika ModemUSB/E12 Software Setup
TELTONIKA
Completing The Setup Wizard.
Teltonika ModemUSB/E12 has been installed on your computer. Click Finish to close the wizard.
Run Modem Control Tool
Autostart the Modem Control Tool on Windows Startup
Autoconnect to the Internet on Modem Control Toll start
Finish
8

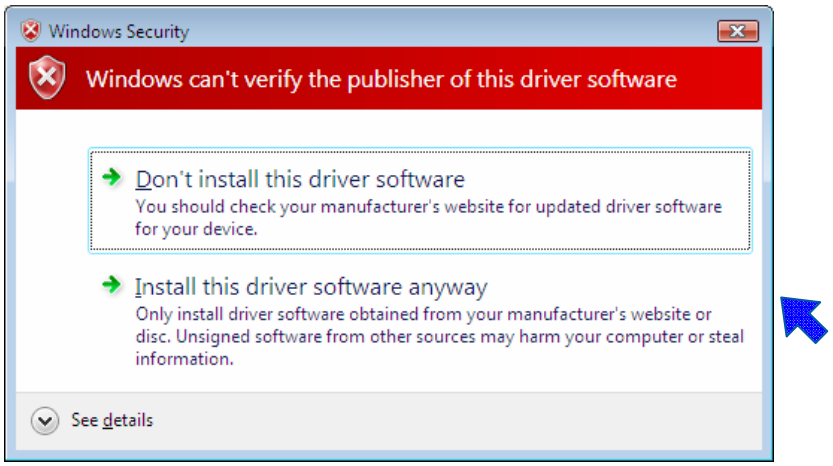
7.2 Driver and Software Installation on Windows Vista

Notice: For first time ModemUSB/E12 modem can only be connected to the PC during the driver installation.

- Insert the CD into CD-ROM.
- Click Install in automatically opened window. If the window did not appear, run autorun.exe file located on the CD in Software catalog. The installation procedure of the ModemUSB/E12 modem will begin.
- Allow to install this software


User Account Control
An unidentified program wants access to your computer
User Account Control stops unauthorized changes to your computer.
The source and purpose of this program are unknown. Don't run the program unless you have used it before or know where it's from.
Setup.exe
Unidentified Publisher
Cancel
I don't know where this program is from or what it's for.
Allow
I trust this program because I've used it before or I know where it's from.
Details

- Then continue standard installation procedure
- After modem inserted, allow to Install driver anyway


Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

7.3 Software description

This section provides the main information about MCT (Modem Control Tool), its settings and features.

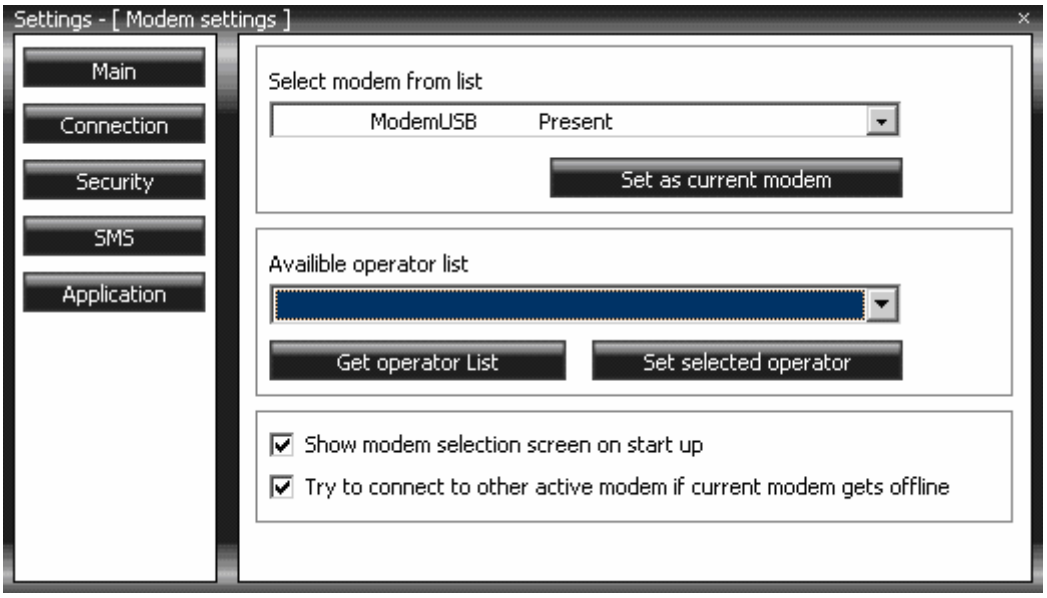
7.3.1 Modem Control Tool Preparation to Work

To run the Modem Control Tool, double click the MCT pictogram located on the desktop, or go to Start → Programs → Company → ModemUSB E12 → Modem Control Tool USB E12. If the program is being run for the first time or there are more than one modems installed, a window asking to select modem from the list will appear.

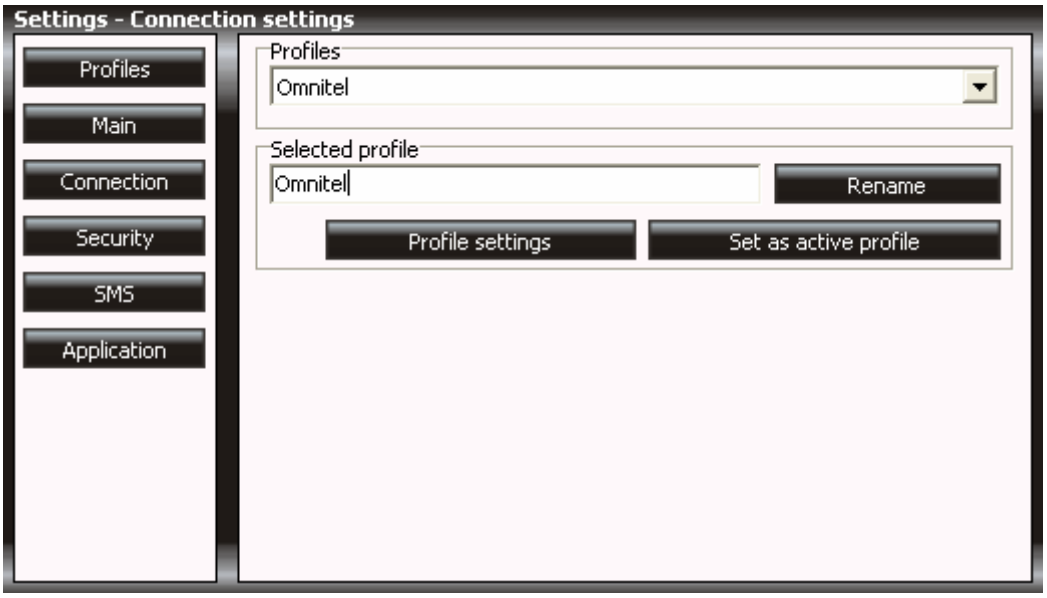
Click OK. In the opened window choose ModemUSB E12 Present and click Set as current modem.

If PIN code request is active in your SIM card, a window for inserting the PIN code will appear.

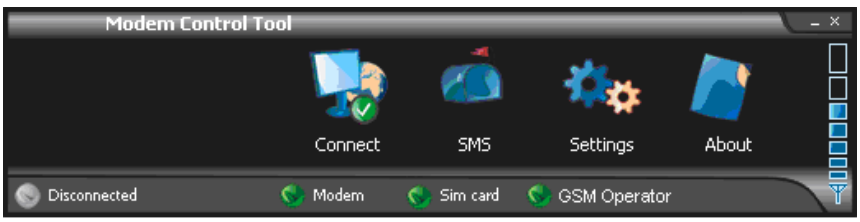
If you will enter wrong PIN code three times in a row, the program will ask to enter the PUK code! When the required data inserted correctly, click OK and the main Modem Control Tool window will open.



If your current software version supports profiles, then you can easy manage more than one SIM card for your Modem. You can set up connection parameters for each SIM card (Operator) in these profiles and rename them in manner you like. This feature available in Settings/Profiles tab.



By clicking on the Profile settings you are able quickly review and edit all parameters of the available profiles.



7.3.2 Connecting to Internet

One of the following connecting types can be used in order to connect to the Internet using the ModemUSB/E12 modem:

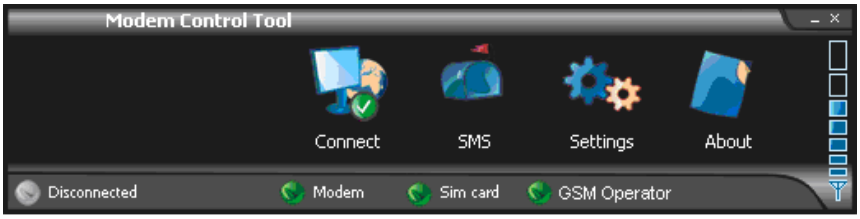
- EDGE or GPRS. In this case, you have to know the APN, and sometimes user name and password;
- CSD. In this case you have to know the phone number of the dial-up server.

Note: APN, user name and password are provided by the GSM operator.

In order to connect to the Internet, enter the required data in Connection window. In the main MCT window click Settings → Connection. Enter connection data as shown below. To save the entered data, click Update.

Before connecting to the Internet, check the GSM signal quality (see the indicator located on the right side of the Modem Control Tool program). If the signal indicator shows low signal quality, place the modem to more open place where the signal will not be blocked by thick walls or ceilings. Placing the device near window may also help.

Modem will start connecting to the Internet after the Connect symbol is clicked in the main MCT window (if the APN, user name and password were entered correctly).



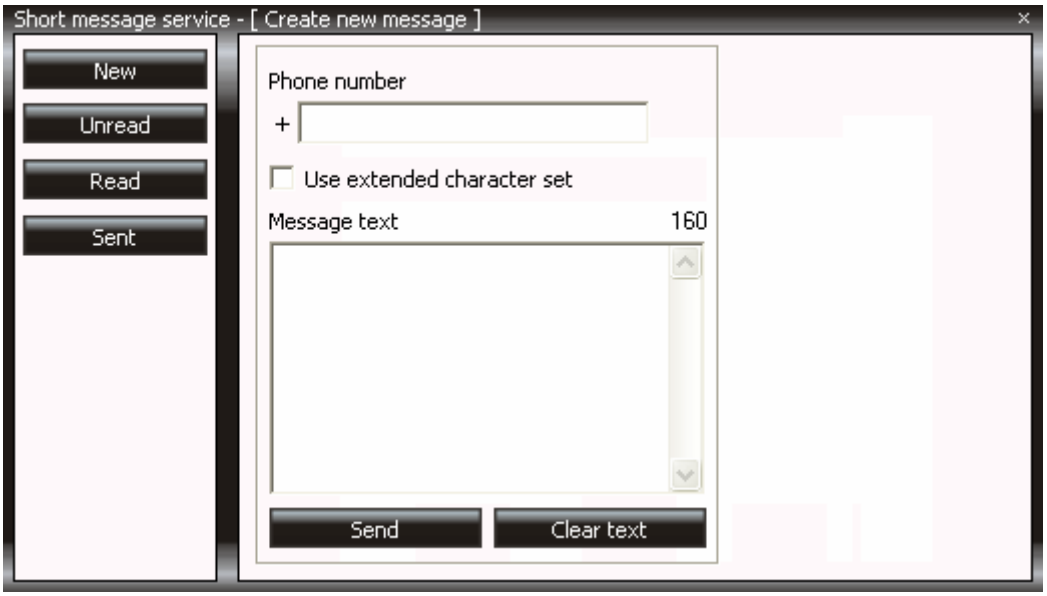
If the ModemUSB/E12 modem connects to the Internet, indicator denoted as Disconnected on the left corner of MCT window turns green and will be denoted as Connected.

When connected to the Internet, in lowest part of MCT you will be able to monitor downloaded/uploaded traffic, upload/download speed and time while connected.

In order to disconnect from the Internet, click Disconnect in the main Modem Control Tool window.

7.3.3 Sending SMS

With ModemUSB/E12 you can send and receive SMS messages. Before sending/receiving SMS messages you must disconnect from Internet! In order to send SMS, click SMS in the main MCT window. A Short message service window will open.



In the opened window, enter the receiver's phone number in the Phone number field. "+"is entered automatically. The message text is entered in the Message text field. Message can be of 160 characters. If you tick the Use extended character set, you will be able to use specific symbols in your message, but the number of characters will be reduced to 70.

If you want to look for received, read or sent SMS messages, click Unread, Read or Sent in the Short message service window. If you want to forward or reply, double click on the message. A Message window will appear.

To make a reply to the message, click Reply. To close the window – Close.

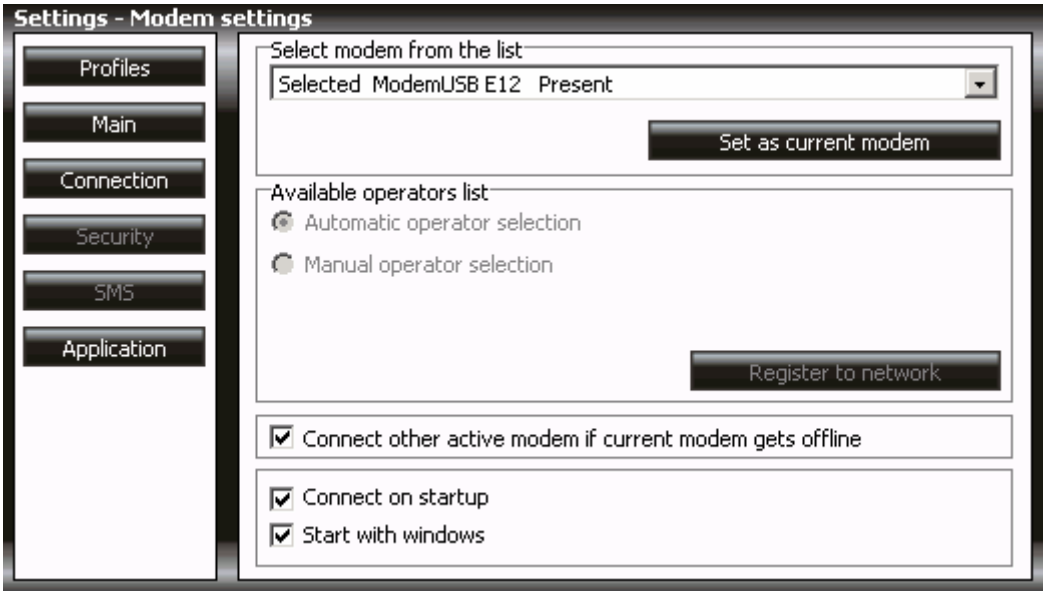
7.3.4 Settings of ModemUSB/E12

To set ModemUSB/E12 modem parameters or to change them, click Settings in the main Modem Control Tool window. If you click Main in the Settings window, you will be able to choose a modem from the list of modems installed in your PC.

You may create profile with all modem settings by clicking Profiles and entering needed parameters. It is very usable if you are using few SIM cards from different operators. As well during roaming.

If you click Connection in the Settings window, you will be able to change the ModemUSB/E12 modem Internet connection parameters.

If you click Settings → Security, a Security window will open where you can enable or disable PIN code query.



To enable PIN code query, choose PIN Code Query Enabled in Security State frame and click Update. A pop-up window will appear. Enter the PIN code of your SIM card in the Insert Pin Code field and click OK.

Now, the Modem Control Tool program will ask for the PIN code each time you connect the ModemUSB/E12 modem to your PC USB port

To disable PIN code query, choose PIN Code Query Disabled in Security State frame and click Update.